

**Air Pollution Control Advisory Council (APCAC) Meeting**  
**Thursday August 23, 2006 – 1:30 p.m.**  
**Lee Metcalf Building – Room 111**  
**Montana Department of Environmental Quality (DEQ)**

Members present were Michael Barton, Chad Doheny,, Mary Jane McGarity and Neil Turnbull. ARMB staff present were Chuck Homer, Lisa Peterson, Bob Jeffrey, John Coefield and Oline Barta.

Chuck Homer called the meeting to order at 2:45 p.m. He introduced himself and explained that the Air Resources Management Bureau encompassed the vast majority of the air program of the department and that one of his responsibilities was to serve as Secretary to the Air Pollution Control Advisory Council. The goal of the Council is to advise the department on rulemaking. Since we don't have a lot of rulemaking going on now, Mr. Homer said that he planned to use this meeting to show them a bigger picture of what was happening in Air Quality. He stated the agenda included a review of the recommendations of the Montana Climate Change Advisory Committee, a presentation by Bob Jeffrey on current PM<sub>2.5</sub> information and John Coefield, our meteorologist would describe our system of monitoring and reporting on smoke and wildfire.

He asked the attendees to introduce themselves for the benefit of any new people and then introduced Lisa Peterson, DEQ Public Affairs Coordinator. Ms. Peterson began her talk by explaining that recommendations from the Climate Change Committee were "hot off the press" and that we were one of the first groups to hear them. Governor Schweitzer, in December 2005, requested that DEQ Director, Richard Oppen, develop a plan for a climate change committee. Mr. Oppen appointed an 18-member council, which consisted of members from a diverse background, and a 6-member scientific advisory panel. This group collaborated with the Center for Climate Strategy, a group which helps states to develop climate action plans. The Climate Change Advisory Committee has completed their six meetings. The draft version of this report will be finalized in mid-September after one last conference call. She noted it will be a detailed, comprehensive report. An emissions inventory will be given out about the same time as the report.

Ms. Peterson said that the work of the committee was divided into five separate areas:

- Energy Supply
- Residential, Commercial, Institutional and Industrial
- Transportation & Land Use
- Agriculture, Forestry and Waste Management
- General or Crosscutting Issues.

Starting with a catalog of possible state actions, the group broke into technical working groups that included other experts brought in to help. Between the regular meetings, they also worked by conference calls. They eventually came up with 55 draft recommendations.

Montana produces approximately 36.7 million metric tons of consumption-based carbon dioxide-equivalent emissions for 2005. This was a consumption base rather than a production base, because Montana produces about 40% more power than we actually use here. Ms. Peterson said that for a per capita base, we actually have pretty high amount of green house gases. Montana emits about 40 million metric tons of CO<sub>2</sub>-equivalent per year. She said that this was high probably due to agriculture—26% (including methane from cattle)—and electricity production—27%. Coal has been overtaking hydro-electric production, 65% to 33%.

Ms. Peterson noted that transportation was the next largest contributor. Gasoline-powdered vehicles are 60% of the emissions and diesel fuel accounts for about 34%. If no actions are taken to reduce greenhouse gas emissions, Montana's emissions are expected to climb to 42 million metric tons by 2020.

Montana no longer absorbs more greenhouse gas emissions than we were produce. The “net” is about 8 million metric tons.

Ms. Peterson highlighted some of the recommendations from the Climate Change Advisory Committee. Montana should:

- Reduce greenhouse emission to 1990 levels by 2020 and an 80% reduction by 2050.
- Have a periodic, complete inventory of greenhouse gas emissions.
- Participate in the 30-state Climate Registry.
- Require that utilities supply 20% of their load from renewable sources of energy by 2020.
- Require that all fossil fuel-fired power plants meet a technology fuel-neutral emissions level. This would include sequestration as part of the permitted process. The council recommends that DEQ petition the Board of Environmental Review for the appropriate rule changes. Ms. Peterson pointed out these new rules would come before APCAC as part of the rule change procedure.
- Implement demand-side management to decrease the use of electricity and natural gas.
- Review building codes and provide incentives to reduce energy consumption
- Implement consumer education programs related to energy efficiency.
- Increase efficiency of low income residential units.
- Adopt the California “Pavley” emissions standards in order to reduce GHG emissions from new light-duty vehicles
- Set minimum energy efficiency standards for replacement tires, requiring that information about Low-Rolling Resistance (LRR) tires is generally available.
- Implement a set of growth and development policies, i.e. smart growth, open space protection, expanded transit, etc.
- Seek to increase the use of Low Carbon Fuels, retrofit on-road heavy-duty diesel vehicles to reduce particulate emissions and reduce idling at rest areas.
- Lead by Example. The state should take the lead by lowering emissions from vehicle fleets.

- Increase bio-diesel production to meet 20% of demand by 2020 and increase ethanol production capacity.
- Retain crop acres in the Conservation Reserve Program (CRP), initiate programs to increase forests and increase solid waste recycling.

More information is available at [www.mt.climatechange.org](http://www.mt.climatechange.org). Ms. Peterson finished her talk by noting that the suggested changes were a multi-level solution that would need to be implemented by individuals, business and the different levels of government and that some of the changes would be costly.

The attendees had no questions. Chuck Homer reiterated Ms. Peterson's comments that the rulemaking inherent in these changes would come before this Board. Rulemaking would be necessary to permit carbon sequestration and to establish CO<sub>2</sub>. The draft rules would come before APCAC. Mr. Homer said that things are changing by the moment and there will be updates on this topic at least by next year. He thanked Lisa Peterson for her presentation.

Mr. Homer said the next presentation would be about PM<sub>2.5</sub>. As some background information, he said that PM<sub>2.5</sub> was one of the major pollutants that we deal with. Over his career, it has gone from Total Suspended Particulates (TSP) to PM<sub>10</sub> to PM<sub>2.5</sub>. He said that Bob Jeffrey would give an overview of PM<sub>2.5</sub> standards. This is something we may have to deal with in rulemaking and certainly we have to deal with as Montanans.

Mr. Jeffrey distributed a "white paper" handout and then went on to do a Power Point Presentation on PM<sub>2.5</sub>.

- He spoke of the ambient air quality primary standards to protect public health including sensitive groups and secondary standards to protect such things as crops and buildings.
- An earlier measurement called Total Suspended Particles (TSP) consisted of larger particles 45-50 microns and this standard was replaced by PM<sub>10</sub> in 1987.
- The 1987 PM<sub>10</sub> NAAQS contained a 24-hour standard and an annual standard.
- Mr. Jeffrey listed the eight PM<sub>10</sub> non-attainment areas: Whitefish, Butte, Thompson Falls, Kalispell, Libby, Missoula and Tribal areas of Lake Deer, Polson and Ronan, but pointed out that current control strategies have dramatically reduced the high levels of PM<sub>10</sub> in those areas. Some of the problems from PM<sub>10</sub> were caused by entrained road dust.
- The NAAQS for PM<sub>2.5</sub> was established in 1997. The 24 hour PM<sub>2.5</sub> standard was set at 65 µg/m<sup>3</sup> for a 24 hour average and revised in 2006 down to 35 µg/m<sup>3</sup>.

Some slides showed the different monitors for PM<sub>2.5</sub> and PM<sub>10</sub>. Neil Turnbull asked how many monitors the state had and how it was determined where they were put. Mr. Jeffrey didn't know the exact number but thought there were about 15 or 16. He said their location was determined by EPA regulations. John Coefield mentioned that professional judgment also played a role and said the monitors were very expensive.

- Mr. Jeffrey's slide show went on the detail the causes of PM<sub>2.5</sub> such as forest fires, road dust, vehicle and power plant emissions and wood-burning stoves. The particles come either from internal combustion or a reaction in the air from gases.
- Road dust is largely PM<sub>10</sub>, not PM<sub>2.5</sub>. Michael Barton asked if we continue to monitor PM<sub>10</sub>. Mr. Jeffrey said that EPA requires monitoring even though we are in compliance. Sudden, unusually-high data from a specific incident is allowed by the EPA to be flagged and excluded from the annual average.
- Some of the fine particulate matter PM<sub>2.5</sub> comes from vehicles particularly diesel emissions and some of that PM<sub>2.5</sub> is carcinogenic. EPA is so concerned about diesel emissions that they have a program to retrofit fleets like city buses.
- Open burning and Forest Service Wildland Fire Use (WFU) are other sources of PM<sub>2.5</sub>.
- Inversions in the western mountain valleys in the winter cause serious problems. Snow reflects the solar energy that would improve the situation.
- Libby, Hamilton and Missoula are not in compliance with the new 24-hour standard of 35 µg/m<sup>3</sup>. Helena and Butte are on the edge on non-compliance. Seeley Lake is also a concern.

Michael Barton asked what was going on in Seeley Lake. Mr. Jeffrey said that believed the problem was smoke from wood stoves. It doesn't take a large population to have a problem.

Mary Jane McGarity asked about the source of ammonium nitrate pollution. Mr Jeffrey said that in many communities it is formed by a reaction between nitrogen dioxide (NO<sub>2</sub>) emissions from motor vehicles and ammonia emissions (from animals) and can also be from out of state urban areas.

An EPA grant has provided funds to change out 1200-1300 wood stoves. Mr. Barton asked where the money came from and what the replacements were. Mr. Jeffrey said that stove manufactures provided funds for the first 300 stoves and that all new stoves had to meet EPA emission certification standards. Old stoves were scraped.

- Pie charts illustrated the various PM<sub>2.5</sub> emissions sources in the communities of Libby, Missoula and Hamilton during the winter months. The major PM<sub>2.5</sub> emission source in all three was wood stoves. The approximate contributions were 82% in Libby, 55% in Missoula, and 80% in Hamilton. These chemical mass balance (CMB) studies were all conducted during the winter months of November through February. Summer conditions are remarkably better.

Mr. Jeffrey concluded his remarks and offered them copies of his presentation. He also showed the attendees some of the information available on DEQ's website. The EPA's website: [www.epa.gov/air/data](http://www.epa.gov/air/data) was a good site.

John Coefield continued website information with his talk on the Fire and Smoke information available from DEQ. He said when the smoke gets bad and a lot of fires are burning, he does daily updates of the Today's Forecast on the [www.deq.mt.gov](http://www.deq.mt.gov) website.

He works closely with state and county health departments, sending them a brief summary and a link to his report. Mr. Coefield's report tries to answer the questions most people want to know i.e.:

1. Where is the smoke coming from?
2. How bad is it?
3. Will it get better or worse?
4. What can I do about it?

We have hourly reports from eight continuous monitoring stations in the state. We have a link to the National Weather Service Forecast Office and their visibility reports. Ten miles is considered clear and good. This data contains information for many more stations besides the ones DEQ monitors. His report is current using 10:00 a.m. data and is posted by 11:00 a.m. He showed several of the records of days that very smoky. Even though it is updated daily, condition often change by the hour.

He emphasized using the "Visibility Guidelines" featured in the report. People can use this to judge the air quality as it changes during the day. Michael Barton asked about Missoula and if they were on an 8-hour reporting period. Mr. Coefield explained that the national standard was a 24-hour period and we developed the one and eight hour reporting in order to raise an advisory when something changed suddenly. Next year, we will change the system so that it averages the different times better. Mr. Barton pointed out that sometimes the reported air quality category doesn't match the visibility. Mr. Coefield responded that Missoula County has their own system, but you have to "look out the window yourself" and judge the visibility. The report will always be one hour late and they are planning some changes for next year using daylight instead of standard time and some other improvements to be as current as possible. Still the Visibility Guidelines are most important. It is based on an empirical study that we did in Helena 7 years ago.

He said we have information on smoke health effects there too. A lot of research is being done in this area and we can now determine smoke exposure through blood/urine tests. We had no way to measure exposure in the past. We can measure the particles better now. We now know that it is the mix of the particles that determines how harmful the particulate matter is. Questions still remain about whether all PM<sub>2.5</sub> particles are equally harmful. PM<sub>10</sub> still needs to be monitored because it is still causing problems though it is unclear just how.

Other information on the website includes "Wildfire Smoke" A Guide for Public Officials and a report by State Medical Officer Steven D. Helgerson, MD, MPH with information on acute and long-term effects from smoke exposure.

Charles Homer noted that we have had a lot of discussion lately about who uses this website and how best to serve their interests. Smoke can trigger a heart attack in sensitive individuals. The problem is especially bad for those who don't know they have a problem. Michael Barton commented that he has noticed, in Missoula, that people are using the Visibility Standards as a benchmark. Mr. Coefield pointed out that people need to rely on their primary physicians for advice especially if they have health problems.

Mr. Homer asked when the AQI came out. Mr. Coefield replied that they came out in 1999. A proposal was published last April or May. He thought there might be new numbers by next summer. Washington State has already changed its numbers. The federal figures are not reflective of the change in AQI standard from  $65 \mu\text{g}/\text{m}^3$  to  $35 \mu\text{g}/\text{m}^3$ . Michael Barton noted that this changed a lot of cities from moderate to unhealthy. Mr. Coefield said that our advisories will become more stringent and compress good, moderate and unhealthy for sensitive all under  $40 \mu\text{g}/\text{m}^3$ . Bob Jeffrey mentioned that some states like Georgia don't have a monitoring and reporting system nearly as sophisticated as ours.

Charles Homer had a few items to mention as organizational updates. He said we are in the process of transitioning the Air Monitoring and Data Management Section into our Bureau. He thought it would be good for the Bureau to have us all together again.

As for a rulemaking update, we have our annual Fee and IBR rules ready for final approval by the BER at their next meeting. He said will be filling the rule position and getting started on more rules and getting more information out to APCAC.

APCAC is required by statute to have two meetings each year, so we need to have one more before the end of the year. Mr. Homer asked for suggestions as to when to set the next meeting date. Discussion led to looking at times in early November. Mr. Homer also reminded the group that it was a statutory requirement to have a presiding officer. He encouraged members to consider this possibility at the next meeting since we did not have a quorum today. He would work harder to encourage more people come. Two people have resigned this year: Mat Millenbach and Mike Machler.

Mary Jane McGarity asked Mr. Homer to clarify what was expected of members. Mr. Homer admitted that this was a "hard" group, unlike the informal group of folks from the regulating industry who give us opinions from the viewpoint of the regulators.

The BER decides on the rules. The rulemaking is different for different agencies and it is also different for the programs within the DEQ. For Air Quality, it is this Board that makes the preliminary decisions on rules. APCAC's role is to advise us on rulemaking. He believes the purpose of the appointed Board from various backgrounds is to give us a broader view of secondary impacts.

Mr. Barton suggested that Ms. McGarity get in touch with her local health department to get pertinent feedback. Mr. Jeffrey noted that the Gallatin County officials were very interested in starting their own local program. Mr. Coefield stated that he believed the purpose of the group was to provide feedback.

The meeting was adjourned at 3:45 p.m.

Notes compiled by Oline Barta